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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 681,643	05 15 2001	Takatoshi Tsujimura	JP920000112US1	8744

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EXAMINER

COLEMAN, WILLIAM D

ART UNIT PAPER NUMBER

2823

DATE MAILED: 06/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/681,643

Applicant(s)

TSUJIMURA ET AL.

Examiner

W. David Coleman

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 30 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 11-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 30, 2003 has been entered.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohnuma et al., U.S. Patent 6,072,193 in view of Gardner et al., U.S. Patent 6,066,519.

3. Pertaining to claims 1 and 2, Ohnuma discloses a semiconductor process substantially as claimed. See **FIGS. 1A-2D**, where Ohnuma teaches a manufacturing method of an active matrix device (column 17, line 62) including a top gate type TFT, which comprises a process of forming the top gate type TFT, wherein the process of forming the top gate type TFT includes the steps of:

arranging a substrate **101** having source **125** and drain electrodes **126** formed therein in the processing chamber; doping the source and drain electrodes with P (phosphorous), (column 3, lines 51-54); and forming an a-Si layer **103** and a gate insulating film **104** in the processing chamber. However, Ohnuma fails to disclose forming an oxide film on an inner wall of a CVD

Art Unit: 2823

processing chamber. Gardner teaches forming an oxide on an inner wall of a CVD processing chamber (column 6, lines 8-14). In view of Gardner, it would have been obvious to one of ordinary skill in the art because when forming a gate dielectric residual oxide forms on the chamber walls (column 6, lines 10-12).

4. Pertaining to claim 2, Ohnuma fails to disclose removing the oxide film from the inner wall after the step of forming the a-Si layer and the gate insulating layer. Gardner teaches the step of removing oxide between runs. In view of Gardner, it would have been obvious to one of ordinary skill in the art to remove oxide from the chamber walls after the step of forming the a-Si layer and the gate insulating film because the a silicon gate dielectric layer may be formed in a highly controlled manner (column 6, lines 21-23).

5. Pertaining to claim 3, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1,

wherein the oxide film contains SiO_x.

6. Pertaining to claim 4, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1, wherein the active matrix device is a liquid crystal display (column 17, line 62).

7. Pertaining to claim 5, Ohnuma teaches a manufacturing method of an active matrix device according to claim 1, wherein the active matrix device is an electroluminescence display (column 17, line 62).

8. Pertaining to claim 6, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the oxide film contains SiO_x.

Art Unit: 2823

9. Pertaining to claim 7, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the active matrix device is a liquid crystal display.
10. Pertaining to claim 8, Ohnuma teaches a manufacturing method of an active matrix device according to claim 3, wherein the active matrix device is a liquid crystal display.
11. Pertaining to claim 9, Ohnuma teaches a manufacturing method of an active matrix device according to claim 2, wherein the active matrix device is an electroluminescence display.
12. Pertaining to claim 10, Ohnuma teaches a manufacturing method of an active matrix device according to claim 3, wherein the active matrix device is an electroluminescence display.

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to W. David Coleman whose telephone number is 703-305-0004. The examiner can normally be reached on 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 703-306-2794. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7721 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

W. David Coleman
Primary Examiner
Art Unit 2823

